

**United States Environmental Protection Agency
Criminal Investigation Division
Investigative Activity Report**

Case Number

0800-0593

Case Title:

Abound Solar, Inc.

Reporting Office:

Denver, CO, Area Office

Subject of Report:

Collateral Request for Assistance in Conducting an Interview to EPA-CID Region 4.

Activity Date:

April 3, 2013

Reporting Official and Date:

(b) (6), (b) (7)(C)

Special Agent

03-APR-2013, Signed by: (b) (6), (b) (7)(C)

Approving Official and Date:

(b) (6), (b) (7)(C)

Special Agent in Charge

04-APR-2013, Approved by: (b) (6), (b) (7)(C)

SYNOPSIS

EPA-CID Region 8 hereby requests that Special Agents from EPA-CID Region 4 conduct an interview of a former Engineer for Abound Solar, Inc. who lives in Chapel Hill, North Carolina.

DETAILS

BACKGROUND:

Abound Solar, Inc. (Abound), formerly Ava Solar, is a solar panel company that maintained corporate and manufacturing facilities in Colorado. Abound's website indicated that they produced next generation thin film cadmium-telluride solar modules that were ideally suited for commercial and utility scale installations. In December of 2010, Abound was approved for a \$400 million loan guarantee from the United States Department of Energy (DOE). In July 2012, the EPA-CID Region 8 received information that Abound was illegally disposing of cadmium contaminated wastes at an unpermitted facility and making material false statements to the EPA, relating to the company's hazardous waste compliance, and to the DOE relating to the section 1705 loan guarantee program.

EPA-CID and DOE Office of Inspector General (OIG) Agents have conducted interviews and have learned that Abound, a large generator of hazardous wastes, used an automated dry deposition process to add cadmium compounds during the manufacturing process of their solar panels. The excess cadmium on the panels was rinsed off using deionized water, which created a sludge of, among other things, cadmium chloride and water. The rinsate from the solar panels was then filtered through tanks that contained cationic and anionic resins. The cationic resin removed the cadmium molecules and the anionic resin removed the chloride molecules. After the cadmium and chloride molecules were removed from the water by the resins, the water was returned to the manufacturing process to rinse the panels and the cycle was repeated.

Despite the fact that the ion resin beads were supposed to be treated as hazardous waste, because of the cadmium, they were transported to the Culligan Water Conditioning facility in Brighton, CO (Culligan), and disposed of in a dumpster behind the facility. Culligan is not permitted to treat, store, or dispose of hazardous wastes. It has been determined that the waste ion resin beads are a characteristic hazardous waste and exceed the regulatory limit for cadmium. Former Abound employees have advised that from April 2009 to January 2010, they voiced their concerns regarding

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the improper disposal of the resin to Abound management. Witnesses have related that Toxic Characteristic Leaching Procedure (TCLP) tests were conducted on the resin sometime in 2008 or 2009, but these TCLP tests were only “proof of theory tests” to determine if the ionic resin beads were absorbing the cadmium from Abound’s process rinse water.

REQUEST FOR ASSISTANCE:

(b) (6), (b) (7)(C) is a former engineer and manager for Abound. An employee who reported to (b) (6), (b) (7) was responsible for developing the process of using water to rinse the cadmium chloride off of Abound’s solar panels during the manufacturing process. EPA-CID Region 8 respectfully requests that Special Agents from EPA-CID Region 4 interview (b) (6), (b) (7) seeking information relating to his employment at Abound and his knowledge of Abound’s hazardous waste handling practices.

SA (b) (6), (b) (6), (b) (b) (7), (7)(C) is Abound’s case agent. The EPA-CID Region 4 Agent who is assigned to this request should contact SA (b) (6), (b) (b) (7)(C) for criminal history and location information for (b) (6), (b) (7)(C). Any questions regarding this request for assistance should be referred to SA (b) (6), (b) (b) (7)(C). In addition, a list of interview questions, photographs of the large resin tanks, and photographs of the small resin filters are attached to this investigative activity report.

ATTACHMENT

Interview Questions: (b) (6), (b) (7)(C)

Photograph 1: Large Cation Resin Tanks.

Photograph 2: Large Cation (Blue) and Anion (Red) Resin Tanks.

Photograph 3: Large Cation (Blue) and Anion (Red) Resin Tanks.